GREAT SEDIMENT SETTLEMENT RACE – STUDENT WORKSHEET

NAME: _____ **CLASS:** _____ **DATE:** _____

Question 1) Name local environments that can carry sediment particles.

_____
_____
_____

Question 2) Name local processes that can physically break down rocks and minerals.

_____
_____
_____

Question 3) Define the following terms:

Sediment _____
_____

Soil _____
_____

Humus _____
_____

Velocity _____
_____

Sedimentation _____
_____

Transportation _____
_____

Erosion _____
_____

Turbidity _____
_____

GREAT SEDIMENT SETTLEMENT RACE EXPERIMENT REPORTING

Step 1: Record particle sizes to include their name and measurement in millimeters. Make 4 measurements for each grain size and then average them in the spaces provided below. Use your sediment chart to determine what your particle is called based on its measured size. You may need to use your magnifying glass to see the grains.

	Sediment 1	**Sediment 2**	**Sediment 3**	**Sediment 4**
	_____	_____	_____	_____
	_____	_____	_____	_____
	_____	_____	_____	_____
	_____	_____	_____	_____
Average Size	_____	_____	_____	_____
Sediment Type	_____	_____	_____	_____

Step 2: Start the race as your teacher instructs. Record your beginning time.
Step 3: Record your ending time (when all particles have settled to the bottom)

	Sediment 1	**Sediment 2**	**Sediment 3**	**Sediment 4**
Name	_____	_____	_____	_____
Average Size	_____	_____	_____	_____
Beginning Time	_____	_____	_____	_____
Ending Time	_____	_____	_____	_____

Did you stir your water *after* the sediment settled? Circle Yes or No

YES NO

What did you observe? _____
_____
_____
_____
_____
_____

Now think, what processes might cause stirring in the estuary?

_____
_____
_____

Did you stir your water *while pouring* in your sediment? Circle Yes or No

YES NO

What did you observe? _____
_____
_____
_____
_____
_____

Now think, what sediment sizes might constantly be suspended in the estuary?

_____
_____
_____

Looking at your Hjulstrom diagram, what would be the velocity range of the water (how fast) to move the sediment sizes we've studied today?

Sediment Type	**Velocity**
_____	_____
_____	_____
_____	_____
_____	_____

Why do you think it takes more energy to move pebbles? _____
_____
_____

What would happen to muddy water that was in water with zero velocity?

_____
_____

Sediment Size Chart

Name of Particle	Size Range	Loose Sediment Type
Boulder	>256 mm	Gravel
Cobble	64 - 256 mm	Gravel
Pebble	2 - 64 mm	Gravel
Sand	1/16 - 2mm	Sand
Silt	1/256 - 1/16 mm	Silt
Clay	<1/256 mm	Clay, mud

Hjulstrom Diagram for Water Velocity and Sediment Size